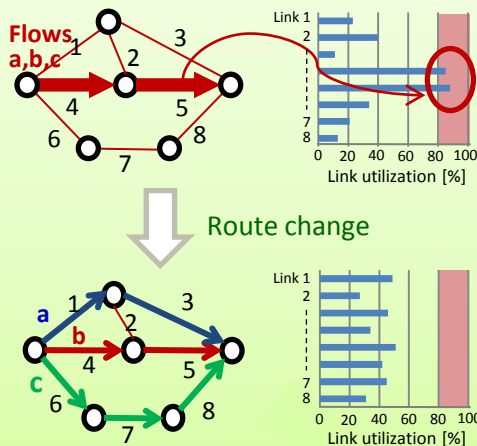


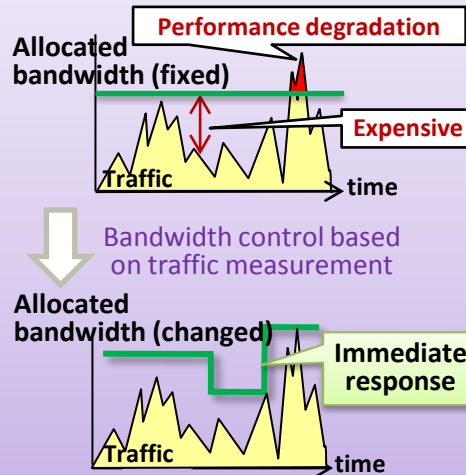
Traffic optimization framework based on centralized control **NTT**

A traffic optimization framework, such as route and bandwidth optimization, is enabled by applications on transport network controller which integrates the IP and optical control planes.

Route optimization



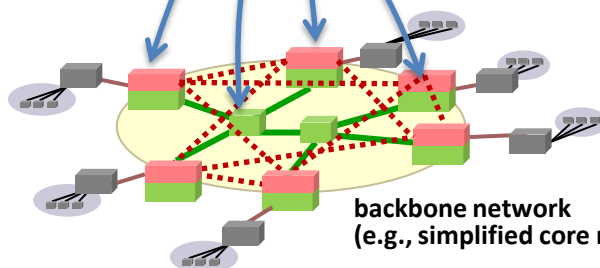
Bandwidth optimization



SDN protocol
(e.g., OpenFlow)

Applications

Transport Network Controller



Benefits

- High degrees of freedom in network control which cannot be realized by the conventional IP are derived from centralized control.

Features

- Route optimization
 - Routes are optimized for purposes such as equalizing the use of facilities.
 - Route changes are executed while avoiding transient congestion and open- and closed-loop congestion.
- Empowered by Virtual Network Controller Ver2.0[®] made by NTT Data Corp.
- Bandwidth optimization
 - Measurement-based control determines need for immediate bandwidth increases while predicting increases in the amount of user traffic.

[1] T. Hamano, M. Namiki, K. Aoyagi, "Simplification of core network by decoupling IP routing functions from transport node", iPOP2013, May 30-31, 2013, Tokyo, Japan